

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 June 2004 (10.06.2004)

PCT

(10) International Publication Number
WO 2004/047734 A3

(51) International Patent Classification⁷: **A61K 48/00**,
31/70, 31/715, A01N 43/04, C07H 21/04, 21/02

(21) International Application Number:
PCT/US2003/037157

(22) International Filing Date:
21 November 2003 (21.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/428,643 21 November 2002 (21.11.2002) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
12 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS AND IMMUNE MODULATORY NUCLEIC ACID COMPOSITIONS FOR PREVENTING AND TREATING DISEASE

(57) Abstract: This invention relates to methods and compositions for treating or preventing disease comprising the administration of immune modulatory nucleic acids having one or more immune modulatory sequences (IMSS). The invention further relates to the means and methods for the identification of the IMSS for preventing or treating disease, more particularly the treatment and prevention of autoimmune or inflammatory diseases. The invention also relates to the treatment or prevention of disease comprising the administration of the immune modulatory nucleic acids alone or in combination with a polynucleotide encoding self-protein(s), -polypeptide(s) or -peptide(s). The present invention also relates to methods and compositions for treating diseases in a subject associated with one or more self-protein(s), -polypeptide(s) or -peptide(s) that are present in the subject and involved in a non-physiological state.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/37157

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 48/00, 31/70, 31/715; A01N 43/04; C07H 21/04, 21/02

US CL : 536/23.1, 24.1; 514/44, 54

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.1, 24.1; 514/44, 54

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X/P	ZEUNER et al. Reduction of CpG-induced arthritis by suppressive oligodeoxynucleotides. Arthritis and Rheumatism. August 2002, Vol. 46, No. 8, pages 2219-2224, see entire document.	7-10
X/P	HO et al. An immunomodulatory GpG oligonucleotide for the treatment of autoimmunity via the innate and adaptive immune systems. J. Immunology. 2003, Vol. 171, pages 4920-4926, see entire document.	1-6, 11-24
X	STACEY et al. Immunostimulatory DNA as an adjuvant in vaccination against Leishmania major. Infection and Immunity. August 1999, Vol. 67, No. 8, pages 3719-3726, see entire document.	7-10
X	US 6,225,292 B1 (RAZ et al) 01 May 2001 (01.05.2001), see entire document.	7-10
X	US 6,194,388 B1 (KRIEG et al) 27 February 2001 (27.02.2001), see entire document.	1-24
X	US 2002/0164341 A1 (DAVIS et al) 07 November 2002 (07.11.2002) see entire document.	1-24



Further documents are listed in the continuation of Box C.



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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

27 April 2004 (27.04.2004)

Date of mailing of the international search report

08 JUN 2004

Name and mailing address of the ISA/US

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X/P	US 2003/0181406 A1 (SCHETTER et al) 25 September 2003 (25.09.2003), see entire document.	1-24

INTERNATIONAL SEARCH REPORT

PCT/US03/37157

Continuation of B. FIELDS SEARCHED Item 3:

EMBASE, BIOSIS, USPATFULL, PGPUB, MEDLINE, CABA, AGRICOLA, WPIDS, JAPIO, NPL, WEST

Search terms: inventor names, bacterial dna, microbial cpg, gpg motif, autoimmune disease, treatment, iddm, arthritis, polyG region, multiple sclerosis